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Sustainable development: promotion of new and renewable sources of energy

Reliable and stable transit of energy and its role in ensuring sustainable development and international cooperation

Report of the Secretary-General

Summary

The reliable and stable transit of energy is an issue that is essential to sustainable development. Energy transit will continue to demand attention as the transition to a global economy progresses. The unique characteristics of energy transit include reliance on fixed infrastructures, high up-front investments and large economies of scale, capacity constraints, pipelines that traverse multiple legal jurisdictions, and its direct contribution to energy security. Considering that many countries do not possess sufficient energy resources, the need to import such resources through pipelines and other transportation systems has become increasingly important. The growing dependence of consuming countries on imported energy has greatly increased the volumes of energy traded across borders. Transit occurs principally through fixed infrastructures and passes through an increasing number of sovereign jurisdictions, which poses a number of management challenges. There are opportunities for reconciling the interests of energy producing, consuming and transit countries. Energy transit requires extensive international cooperation to promote reliable transportation to international markets. The value of having a balanced and efficient framework for developing partnerships is widely recognized. The ultimate goal of reliable and stable energy transit, whether for trade or consumption, is to ensure continued progress towards sustainable development.

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I. Introduction

1. In its resolution 67/263, the General Assembly noted that stable, efficient and reliable energy transportation, as a key factor of sustainable development, was in the interest of the entire international community. The Assembly recognized the need for extensive international cooperation to promote the reliable transportation of energy to international markets through pipelines and other transportation systems.

2. The present report is submitted in response to resolution 67/263, in which the Assembly requested the Secretary-General to submit to it at its sixty-ninth session a summary report of the views of Member States and relevant entities of the United Nations system on issues relating to the reliable and stable transit of energy and on possible modalities for international cooperation.

3. At the High-level Conference on Reliable and Stable Transit of Energy and its Role in Ensuring Sustainable Development and International Cooperation, held in Ashgabat on 23 April 2009, Member States, international organizations and companies emphasized their willingness to cooperate on the transit and consumption of energy resources. Participants at the Conference noted the importance of clear regulation of the whole set of rights and responsibilities of energy producing, consuming and transit countries, taking into consideration the norms and principles of modern international law (see A/63/843, annex).

II. Overview of energy transit

A. Energy security and transit

4. Access to energy is essential for strengthening economies, achieving equity, eradicating poverty and pursuing sustainable development. A key component of access to energy is energy security. Energy security is based on the notion that uninterrupted supplies of energy are critical for the healthy functioning of an economy. An exact definition of energy security has not been globally agreed upon. Energy security has different meanings to different people at different moments in time.[1] Traditionally, energy security has been associated with securing access to oil supplies. However, with a rise in natural gas use and renewable energy, the concept has been widened to cover other fuels. It has also been used to refer to the reliability of electricity supply systems. Power blackouts on both the east and west coasts of the United States of America, in Europe and in the Russian Federation, and chronic shortages of electric power in China, India and other developing countries, indicate that all nations face energy security concerns.[2]

5. For energy to be secure, it must be available, accessible, affordable, reliable and sustainable. Availability refers to the actual physical presence of energy resources. Accessibility is a function of the distance between the points of production and consumption of resources, particularly when a country accesses resources from outside its borders. Affordability is a reflection of the market equilibrium price paid by consumers that allows producers to cover their costs or to

[1] Kruyt and others, "Indicators for energy security", *Energy Policy*, vol. 37, No. 6 (June 2009), pp. 2166-2181.

[2] Daniel Yergin, "Ensuring energy security", *Foreign Affairs* (March/April 2006), p. 70.

make a reasonable profit. In order to be reliable, energy supplies should not be subject to political or technical disruptions, and delivery paths should remain unencumbered. Sustainability refers to the long-term availability of energy resources, which entails efficient allocation over time, diversification of resources, and/or transitioning to alternative renewable fuels.

6. At the global level, achieving sustainable energy for all depends very much on the reliable and stable transit of energy in all forms. This is a critical element in energy security and a necessary condition for mobilizing investment. In addition, overall system efficiency depends on interconnectivity and interdependence, neither of which is possible without the reliable and stable transit of energy.

7. One of the main challenges facing energy security worldwide is the need for stable, efficient and reliable transit. Energy transit is playing a growing role in global processes, requiring efforts at the national, bilateral, subregional, regional and international levels to build energy transportation systems and facilitate the trading of energy resources (see resolution 67/263). Without cross-border transport of fuel sources, many countries that do not have sufficient domestic resources would be unable to meet their own fuel demand. This is particularly true of landlocked developing countries and small island developing States.

8. Landlocked developing countries, as a group, are among the poorest of developing countries, with limited capacities and dependence on a very limited number of commodities for their export earnings. Lack of territorial access to the sea, remoteness and isolation from world markets have contributed to their relative poverty and substantially inflate their transportation costs (see A/CONF.202/3). The median landlocked country tends to incur transport costs 50 per cent higher than those of the median coastal country, and to have trade volumes that are 60 per cent lower.[3] High transit costs have become a restrictive barrier to trade for landlocked developing countries. The special needs of landlocked developing countries can be addressed, inter alia, by establishing and promoting efficient transit transportation systems that link those countries to international markets (see resolution 67/263), as well as by including a special focus on investing in the improvement of transit infrastructure, with the objective of reducing the cost of transit.

9. As a result of their geographic isolation and lack of fossil fuel endowment, small island developing States rely heavily on imported energy resources, which poses a number of capacity constraints and contributes to energy insecurity. Many small island developing States are net importers of fossil fuels, which are used as their primary source of energy to meet local demand. Exacerbating the insecurity are vulnerabilities associated with the impact of extreme weather variability, especially natural disasters, on the availability and distribution of energy. Furthermore, the sheer distance of transit imposes added costs on the energy trade. For small island developing States, as much as 15 per cent of gross domestic product can be expended on energy imports, with the per-unit cost of electricity being among the

[3] United Nations Conference on Trade and Development (UNCTAD), "Challenges and opportunities for further improving the transit systems and economic development of landlocked and transit developing countries" (UNCTAD/LDC/2003/8), p. 6.

highest in the world.[4] The increasing cost of imported fossil fuels represents a major impediment to the achievement of sustainable development and poverty eradication in small island developing States, and requires special attention within the energy transit framework.

10. Energy transit countries are also in a unique situation. They facilitate the conveyance or transportation of energy through their jurisdictions and into that of other countries, through pipelines, transmission lines, rail or ship. Such countries play a critical role since others depend heavily on them for access to energy. As transit countries, they have extensive influence on negotiating transit terms and conditions, including transit fees. The fees are an important incentive for providing reliable transit and for building related infrastructure. Such countries are home to multidimensional pipelines with extensive capacities and to storage facilities that are used to balance and regulate the flow of oil and gas from suppliers to markets. Building up the carrying capacity of transit countries is a critical factor to keeping pace with increasing global energy demand.

11. History has shown how the transit of oil and gas through pipelines can become the locus of important conflicts and disagreements, sometimes resulting in the cessation of throughput for shorter or longer periods of time. Halting energy flows is not beneficial to any party and often has an adverse impact on multiple other countries as well. This demonstrates that the negotiation of long-term contracts that address the interests of producing, consuming and transit countries is critical to long-lasting cooperation and amicable relations. International cooperation may play an important role in reducing the potential for conflicts and disagreements.

B. Treaties and agreements relevant to energy transit

12. There are a number of treaties and agreements that affect or regulate energy transit, directly and indirectly. Some have existed for decades while others have come into existence more recently. The General Agreement on Tariffs and Trade dates back to 1947, while the World Trade Organization (WTO) Agreement on Trade Facilitation was signed in 2013. Efforts to govern energy transit are continually evolving and improving.

13. Energy transit is relevant to the economic development of States, touching on issues such as the transit of goods and services, the facilitation of trade, the rights of landlocked States, and freedom of the high seas and transnational rivers. Each of those domains is addressed by customary international rules and international law, and is part of a wider concept of "freedom of transit".[5] Freedom of transit as a principle in international law is manifested as access to the sea for landlocked countries. Goods, means of transport and individuals should enjoy freedom of

[4] Brief prepared by the Technical Support Team of the Department of Economic and Social Affairs of the Secretariat and the United Nations Development Programme, entitled "Needs of countries in special situations: African countries, least developed countries, landlocked developing countries and small island developing States, as well as the specific challenges facing middle-income countries".

[5] Danae Azaria, "Energy transit under the Energy Charter Treaty and the General Agreement on Tariffs and Trade, *Journal of Energy and Natural Resources Law*, Vol. 27, Issue No. 4 (2009), pp. 559-596.

transit so as to have access to the sea.[6] In the energy transit context, the principle is extended to refer to freedom of access to energy resources and the movement of energy across borders.

14. The Energy Charter Treaty entered into force on 16 April 1998, developing from a recognized need to ensure that a commonly accepted foundation be established for developing energy cooperation between the States of the Eurasian continent. Today it has 52 signatories, with members far outside of Eurasia. The Treaty covers a broad and diverse range of countries, including energy producing, consuming and transit countries. The objective of the Treaty is to strengthen the rule of law on energy issues by creating a level playing field of rules to be observed by all participating Governments, thus minimizing the risks associated with energy-related investments and trade.

15. Regarding transit, the Treaty's existing provisions oblige its contracting parties to facilitate the transit of energy on a non-discriminatory basis consistent with the principle of freedom of transit. Article 7 of the Treaty states that contracting parties should encourage relevant entities to cooperate in modernizing the energy transport facilities necessary to the transit of energy materials and products; developing and operating energy transport facilities serving the area of more than one contracting party; mitigating the effects of interruptions in the supply of energy materials and products; and facilitating the interconnection of energy transport facilities.

16. Article 11 of the Agreement on Trade Facilitation and article 5 of the General Agreement on Tariffs and Trade both address freedom of transit and also exist as additional bodies of international law invoked in energy trade and transit issues. Article 5 of the General Agreement on Tariffs and Trade establishes that there "shall be freedom of transit through the territory of each contracting party, via the routes most convenient for international transit, for traffic in transit to or from the territory of other contracting parties. No distinction shall be made which is based on the flag of vessels, the place of origin, departure, entry, exit or destination, or on any circumstances relating to the ownership of goods, or vessels or of other means of transport".

17. Article 11 of the Agreement on Trade Facilitation states, inter alia, that "any regulations or formalities in connection with traffic in transit imposed by a Member shall not be applied in a manner that would constitute a disguised restriction on traffic in transit". It also contains provisions for faster and more efficient trade procedures, and for cooperation and coordination on formalities such as charges, legal requirements, and the practical operation of transit regimes.

18. There are uncertainties that arise from the provisions of each of the agreements. For example, WTO has different rules for trade in goods and trade in services. The distinction between trade in goods and trade in services is not always easy to apply in the energy sector and may lead to artificial distinctions.

19. Other opportunities for improving upon the agreements exist in relation to important questions such as the obligation to observe transit agreements, transit tariffs, coordination in the event of accidental interruption, reduction or stoppage of transit and conciliation of transit disputes.

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[6] UNCTAD, "Freedom of transit and regional transit arrangements", Trust Fund for Trade Facilitation Negotiations, Technical Note No. 8, January 2011.

C. Energy transit infrastructure

20. Energy transit infrastructure is crucial to the successful midstream phase of energy development. Energy transit is different from transit of most other goods; it is often grid-bound or stationary and thus capacity-restricted. In the transit of most goods, transported in ships, trucks, or railway cars through a common carrier infrastructure, the issue of capacity constraints can be solved easily as the goods can usually be stored. In those scenarios, the time/capacity factor does not adversely affect the transit. However, because energy transportation is capacity-restricted and energy is more difficult to store, the time and uninterrupted flow aspects matter.

21. Energy projects such as natural gas pipelines, electricity grids and oil tankers all require large upfront investments. Energy infrastructure costs are dominated by the capital costs of the investment and its financing. Construction of transportation pipelines and transmission grids is a substantial long-term investment with little room for flexibility; once constructed such transportation networks can only be used for the transport of specific energy products. Planning for energy transit infrastructure requires well-informed choices in its design and siting; such permanent infrastructure should be durable and resilient to climate risks.

22. The building of energy transit infrastructure may also have an adverse environmental impact. The land, material and energy intensive nature of pipelines and electricity grids can have ecological consequences, including habitat destruction and fragmentation. Conducting environmental impact assessments for such large-scale transboundary projects is always a substantial undertaking. Accordingly, environmental management is an important practice to include as part of international cooperation in the planning, construction and maintenance of transboundary infrastructure.

D. Energy trade

23. Trade in energy is a special type of international commerce. Trade in fossil fuels and electricity accounts for about 15 per cent of global merchandise trade (by value).[7] Because few countries have energy resources and all countries need them, trade in energy has been crucial to filling global energy needs. In many countries, energy markets have been liberalized so that energy products are increasingly subject to standard trading and market rules.

24. Trade in energy encompasses various aspects and issues of transnational trade, including trade in goods, trade in services, investment matters, intellectual property and subsidies. The most significant challenges related to energy trading stem from the fact that a significant part of the international energy trade takes place through fixed infrastructure, built specifically for the purpose of carrying hydrocarbons or electricity. However, WTO rules were not specifically designed to tackle issues arising from the trading of energy across borders through pipelines and grids. An issue that may arise with regard to the energy trade is how to distinguish between trade in energy goods versus energy services.

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[7] John Gault, "A word of introduction from the energy industry perspective", in *Global Challenges at the Intersection of Trade, Energy and the Environment* (Centre for Trade and Economic Integration, Switzerland, 2010), p. 9.

III. Issues relating to the reliable and stable transit of energy and possible modalities for international cooperation

A. Summary of the views and activities of Member States

25. It is in the common interest of Member States and multilateral organizations to ensure the security of energy supply, demand and transit, which are interdependent elements that are essential to securing a sustainable energy future. Many Member States have expressed their support for developing a stable and transparent framework for the trade and transit of energy and for greater international cooperation to support reliable and stable energy transit in the interest of all countries. The following paragraphs summarize the views and activities of Member States.

26. The Russian Federation actively promoted the modernization of the international treaty framework in the sphere of energy, proceeding from the assumption that energy transit was a matter of national sovereignty and was regulated by intergovernmental agreements. The efforts of energy producing, consuming and transit States must be consolidated to provide a collective answer to the modern challenges and threats related to energy. The Russian Federation affirmed that energy transit should not undermine the economic, environmental and energy security of the States involved, reiterating that the practicalities of energy transit through the territory of a given State were subject to national legislation. Furthermore, the Russian Federation indicated that, as far as transit issues were concerned, the available body of international law should be respected, including the Energy Charter Treaty, the General Agreement on Tariffs and Trade (article 5) and the WTO Agreement on Trade Facilitation (article 11). The Russian Federation deemed it possible to have an exchange of views in the framework of the General Assembly on mutually acceptable international modalities for energy transit.

27. Nauru stated that it was a net importer of fossil fuels as the primary source for meeting energy demand and that reliable and stable transit of energy was therefore essential to it. The geographic isolation of Nauru from major supply markets created added energy transit costs, and has required high up-front investment and large economies of scale that have given rise to natural monopolies in the energy sector. Capacity constraints and energy insecurity were realities for Nauru. Building a viable international transit system for Nauru would require an analysis of energy supply and demand to determine the economic viability of such a system. Other conditions would include appropriate pricing and the consideration of long-term contracts. A reliable framework would also require non-discrimination, favourable treatment, facilitation of transit and political support. An uninterrupted flow of energy and effective dispute resolution would be imperative to a reliable framework. Nauru indicated that a transit protocol should be developed, with conditions for access, tariffs, taxes, right of way, approval procedures, licensing and standards all being integral elements.

28. Belarus described itself as a transit State that supported the uninterrupted transfer of energy throughout Europe. Belarus was also a hydrocarbon importer because domestic production did not meet internal demand. In that regard, Belarus was interested in establishing transparent and non-discriminatory transportation and transit of energy resources, and supported broad international cooperation with the goal of providing reliable energy transit to the international market. Belorussian organizations that engaged in the transport of energy resources were interested in

increasing the volume of oil transit through the territory of Belarus. All interested consumers should have access, without obstacles and on equal terms, to the services of the national oil transport system. The geographic position of Belarus between the regions that are the main consumers and producers of natural gas, and its existing natural gas transport system, defined the role of Belarus as a reliable and stable natural gas transit State. The feasible transit volume that passed through Belarus ranged from 54 to 57 billion m^3 per year. Belarus called upon all interested parties to consider once more the proposal for the construction of a second line of the Yamal pipeline through the territory of Belarus. Belarus was ready for international cooperation in the interest of supporting the reliable transit of electricity. In order to realize such transit, Belarus was implementing a series of technical measures to develop the necessary conditions for electricity grid equipment to work within the energy system. Belarus supported the development by the United Nations of an integrated energy agenda with the following elements: the development and adoption by the General Assembly of recommendations that address the development and transfer of renewable energy technologies; the development of a global database of technologies; the establishment of a multilateral fund to finance the development, transfer and application of modern energy technologies; and the creation of an international centre for the transfer of renewable energy technologies. Belarus called for an integrated energy agenda and a new strategic approach to finding effective solutions for energy issues. Such an energy agenda would be addressed on a systematic and consistent basis with key participation of Member States. It would serve as the central platform for decision-making on all the energy-related issues and questions currently not being addressed by the specialized agencies of the United Nations system. The energy agenda would also address problematic issues and challenges, and find solutions that would promote international cooperation.

29. Qatar recognized the importance of existing rules to manage international transit operations among all countries. The use of tools such as international law, treaties and agreements, should be based on the principles of transparency, accountability, objectivity and a balance between the cost of energy transit and services rendered. Qatar added that Governments should also have the right to defend their own corporations. In the near future, Qatar's Department of Energy and International Relations would set up meetings with the relevant State offices in Qatar to carry out energy transit negotiations. Qatar would also coordinate with the countries of the Gulf Cooperation Council to make suggestions to the Secretary-General of the Council on the issue of reliable and stable transit. Depending on the outcome, a meeting would be set up to discuss the framework, with the goal of achieving consensus among the Council members on the issue. In the meantime, the issue of reliable and stable energy transit could be discussed through the Economic and Social Commission for Western Asia (ESCWA) and the Arab League, seeking contributions from member country experts on the issue. The discussion would focus on reaching a pan-Arab decision that would take into account the benefits of a cooperative relationship among Arab countries regarding energy transit. The process would be facilitated through preparation and research on the subject by the international organizations that specialize in the energy business and to which Qatar belonged, including the Organization of the Petroleum Exporting Countries (OPEC) and the Gas Exporting Countries Forum. All member States involved could benefit and it would make for a united and clear position prior to discussing the issue at the United Nations.

30. Slovakia regarded the safe, secure and reliable transit of energy to be critical to the energy security of individual countries and regions. Given the geographical location and historical development of the main transit routes, Slovakia stated that it played an important role in the transit of oil, electricity and, especially, natural gas in Central and Eastern Europe. Its share of transit gas was also significant vis-à-vis the European Union. Given its high dependence on the import of energy goods from abroad, Slovakia was fully aware of the importance of regional cooperation, mainly within the frameworks of the Visegrad Group, the European Union and the Energy Charter Treaty. Regional cooperation could significantly contribute to improving the security of transit and deal with possible market obstacles, including trade and infrastructure issues. Slovakia was actively engaged in the European Union's internal energy market integration. Slovakia saw the benefits of Europe-wide network codes for electricity and gas market operation. To ensure future interoperability, a harmonized approach to the implementation of network codes in the region (i.e., building blocks for the real European Union energy market) were crucial. Harmonized implementation of gas network codes was part of the agenda of the Visegrad gas forum. Cooperation in the regional electricity sector took place within the Central Eastern European Electricity Forum. Slovakia was also actively involved in electricity market coupling with the Czech Republic, Hungary and Romania. The initiatives were deemed to be successful examples of regional energy cooperation with added value for energy transit. The construction of missing infrastructure links was another important precondition for safeguarding the security of transit and increasing the security of energy supplies. Slovakia considered that the North-South gas and electricity corridors in Central and Eastern Europe were crucial. The realization of the priority corridor for oil supplies in Central Europe would benefit oil supply security. Major benefits in terms of gas supply security for Slovakia were realized through reverse flows with the Czech Republic and Austria, pipelines which were constructed with support from the European energy programme for recovery. Slovakia supported the standard process of reverse flow preparation in line with the European Union legislative rules, believing that ongoing market testing, also referred to as "open season", would provide a basis for enabling reverse flows in the technically shortest possible time frame. Further diversification of routes and sources would be important to ensuring security of supply in the European Union. However, it was of the utmost importance that the projects did not undermine the energy security of certain regions and countries and that the projects adhered to internal energy market rules.

31. Paraguay promoted the establishment of an agreement to ensure specific rules for the stable and reliable transit of energy products. The agreement would require energy products to be considered as merchandise of temporal entry through the territory of another party, excluding the payment of import or export taxes. In addition, the proposed agreement would require that the energy products that go through another party's territory receive the same treatment as those belonging to national actors of the transit country. Finally, Paraguay indicated that access to energy transport facility capacity that was available for transit use should be non-discriminatory.

32. Tajikistan acknowledged that access to modern and cost-efficient energy services was of fundamental importance for socioeconomic development, the eradication of poverty and hunger, the improvement of quality of life, the reduction of inequality and for meeting basic human needs. Making access to energy a priority

issue is key to the achievement of all Millennium Development Goals. Tajikistan considered it essential that the United Nations General Assembly, the Economic and Social Council and UN-Energy enhanced their efforts to provide wider access to energy. Access to energy was especially urgent for poor countries and mountainous territories that were remote from major infrastructure. Tajikistan supported the "Sustainable Energy for All" initiative of the Secretary-General and General Assembly resolution 67/215, in which the Assembly declared 2014-2024 the United Nations Decade of Sustainable Energy for All. Along with ensuring reliable and sustainable access to energy, it was necessary to encourage, contribute to and invest in the growing share of renewable energy on a global scale, in the transfer of modern and advanced technologies, and in increased efficiency of energy supply and energy conservation. Tajikistan's hydropower potential of 527 billion kWh per year represented 4 per cent of the world's total. Currently, only 3.2 per cent of that potential had been developed. With efficient cooperation, Tajikistan's export capacity could reach 30 billion kWh by 2020. Developing that capacity would allow Tajikistan to ultimately reduce its impact on the environment and would also boost employment. Such a situation demanded that Tajikistan pay more attention to the construction of hydropower facilities for generating energy. In a consistent and planned manner, Tajikistan had been developing its energy potential based on the comprehensive development of renewable energy sources. All of Tajikistan's projects were being implemented transparently, taking into account the socioeconomic and ecological aspects of the sustainable development of a modern energy sector. Considering Tajikistan's potential in the production of renewable and environmentally clean electric power, the creation of technical opportunities for a regional electricity market was one of the most important issues for the electric power industry in the region. Establishing an electricity transport corridor between the energy surplus countries of Central Asia and the energy deficit countries of South Asia had been studied and found to be beneficial. Thanks to the support of the World Bank and the active participation of all interested countries, a feasibility study had been carried out for the "CASA-1000" project power transmission system between Kyrgyzstan, Tajikistan, Afghanistan and Pakistan. The project was in the final stage of investor selection of investors preceding the start of the construction phase. The whole preparation process of the interregional energy bridge had been accomplished through the joint efforts of all participating countries. Implementation of this project undoubtedly would increase prosperity and security, and would accelerate the growth and expansion of trade among the countries of the region.

33. Turkmenistan regarded energy cooperation as being of particular importance. Turkmenistan had great resource potential, both on land and in the Turkmen sector of the Caspian Sea. The sustainable development of those resources was the basis for its energy security. Turkmenistan had a diversified energy supply system based on the routes from Turkmenistan to China, Iran (the Islamic Republic of) and the Russian Federation. Turkmenistan had intensified its activities to implement a Turkmenistan-Afghanistan-Pakistan-India pipeline project. The implementation of the pipeline would be beneficial to all parties, from political, economic and social perspectives. Currently, work was under way on an internal east-west gas pipeline, approximately 1,000 km long. It would bring together the main gas fields in the country through a unified gas transportation system and significantly increase the export potential of Turkmenistan. Such infrastructure would significantly expand the possibility of diversifying the supply routes of Turkmen natural gas, as well as create an additional guarantee for reliable and stable export of energy resources to

international markets. Turkmenistan acknowledged that General Assembly resolution 67/263 provided the basis for global partnership in the energy sphere, taking into account the interests of energy resource producing, consuming and transit States. Achieving comprehensive security depended largely on ensuring energy security, which was one of the most important components of a stable world economy. With that in mind, the development of an international mechanism envisaging a set of guarantees in the sphere of global energy supplies was a task of paramount global importance. Moreover, Turkmenistan underscored the importance and necessity of joint work and coordinated efforts by all Member States to develop and adopt consolidated approaches to the solution of energy security issues. The establishment of a new universal international law toolkit by the United Nations was a key element of this process, which in Turkmenistan's view should consist of three major elements. First, there should be a multilateral United Nations document forming the legal basis for emerging relations in the international energy resource supply sphere. Leading international scientific institutions should be involved in the process. Second, a corresponding structure at the United Nations should be created to enforce implementation of the provisions of the above-mentioned document. The work of such a structure should be based on the principles of international law, which were incorporated primarily in the Charter of the United Nations. Third, an international database should be created for the collection and analysis of data on the implementation of the international obligations assumed by Member States. The database should be available to all energy dialogue participants and contain comprehensive information on the implementation of international commitments. Turkmenistan stated that the Assembly had welcomed the proposal of Turkmenistan to convene the first international meeting of experts on the energy security and transit issue. The meeting would be held in Ashgabat in late 2014. Turkmenistan invited the participation of experts from Member States and relevant United Nations system entities, including regional commissions and international and regional organizations, and the private sector.

B. Summary of inputs by bodies and organizations of the United Nations system

34. The work of the Economic Commission for Europe (ECE) on energy was designed to support the Sustainable Energy for All initiative of the Secretary-General and to facilitate efforts to secure affordable and sustainable energy supply for its Member States. An energy supply was considered secure if supplies remained robust in the short and long run in the face of political or technical disruptions and resource depletion. The Commission described energy security as collectively requiring investment, diversification of primary fuels, technology and system flexibility, in addition to trust, stable relationships, long-term arrangements and dialogue. The Commission asserted that finding, producing and delivering sustainable energy required investments that would only occur when appropriate framework conditions were in place. The Commission stated that the safe, reliable and efficient transit of energy was one prerequisite for investments to materialize, adding that the United Nations could facilitate the development of a new direction and framework at the international level. Safe and reliable transit of energy could not happen unless the global energy system and all of its moving parts — upstream, midstream and downstream — work together in an efficient and sustainable manner. The Commission had addressed the specific energy transit issues that had emerged

by placing them into three broad categories: the energy trade's reliance on fixed infrastructure; the conditions to make international projects viable; and political support. Some of the infrastructure-related issues included the significant up-front costs and large economies of scale, pathways controlled by incumbent companies, energy security-sensitive energy trade and capacity constraints. For international projects to be viable, there would have to be long-term contracts, reliable investment framework conditions, non-discrimination, non-interruption of energy flows, dispute resolution, conditions of access, tariffs and taxes, rights of way, approvals and licensing and standards. Political support had many important components, including the building of confidence and trust, the provision of regulatory frameworks, credit guarantees and loans, the creation of interfaces between different regulatory environments, the reconciliation of energy producing, consuming and transit countries' interests, and the balancing of geopolitical perspectives with common rules. The Commission stated that international cooperation should engage across all steps in the value chain (upstream/midstream/downstream), involve close and enduring public/private engagement in dialogue and in developing protocols and model agreements, and account for the interests of producing, transit and consuming countries. Like many other stakeholders, the Commission stated that there was a clear need for an ongoing forum to discuss existing and possible future energy security issues. If requested, the Commission could renew the energy security forum that was initiated at the Commission in 2003. Such a forum would include international experts, relevant intergovernmental agencies, industry groups and civil society. Informal sessions would be held on concerns that had been expressed to assess whether they were adequately covered by existing structures and legal instruments, whether they could be addressed by modification and adaptation of what already existed, or if another avenue were required. Informal working sessions would also be held to address the upstream, midstream and downstream segments. At the conclusion, a meeting of intergovernmental experts could be held to integrate and agree on recommendations to present to Member States.

35. One of the main objectives of the Economic and Social Commission for Asia and the Pacific (ESCAP) was to facilitate consensus to promote regional cooperation in enhancing energy security and the sustainable use of energy in the Asia-Pacific. In 2013, the Asian and Pacific Energy Forum was the first intergovernmental ministerial conference on energy under the auspices of the United Nations. The meeting resulted in the adoption of a ministerial declaration and plan of action on regional cooperation for enhanced energy security, which touched upon the topic of reliable and stable energy transit. Participants acknowledged that enhanced energy trade was a powerful catalyst for strengthening intraregional cooperation among all stakeholders, including energy producing, consuming and transit countries. The forum also attached great importance to the establishment of an environment conducive to investment in production, transit and delivery infrastructure, and to trade facilitation policies in both primary energy resources and electricity. ESCAP member States agreed to cooperate on facilitating regional dialogue on energy in order to enhance cooperation among energy producing, consuming and transit countries; encouraging investment in developing and implementing projects for transportation of energy resources within subregions, including for power grids and oil and gas pipelines; promoting initiatives for regional energy connectivity, including those focused on cross-border energy infrastructure development, such as that for oil and gas pipelines and electricity

grids, including hydropower infrastructure, through the identification of possible options for an integrated regional power network, which could contribute to the development of an "Asian energy highway"; and extending cross-border power grids and increasing the efficiency of energy generation, transmission and distribution. In order to review and support the implementation of the ministerial declaration and the plan of action, ESCAP was establishing a multi-stakeholder annual energy dialogue to strengthen further energy cooperation in the Asia-Pacific region, including cooperation on issues relating to the reliable and stable transit of energy.

36. The World Meteorological Organization (WMO) stated that it had expertise on the role that climate information plays in energy trade and transit. Knowledge of climatological extremes (taking into account climate change implications) aided in planning permanent infrastructure that was resilient to climate risks, with adequate spare capacity and path redundancies. Also, climate information could help to create seasonal climate outlooks to support climate risk management for anticipating peaks and troughs in demand to optimize financial gains and reduce losses. Last, it analysed forward-looking trends to inform choices in the design and siting of energy generation schemes, particularly renewable energy. Climate information could be provided by specialized agencies and the national meteorological and hydrological services within the WMO. Since oil and gas might have to be transported by land and sea, weather and climate information was essential to the safety and cost-efficiency of such transportation. In that regard, WMO adhered to the main recommendations and conclusions of the final report of an ECE group of experts on climate change impacts and adaptation for international transport networks. In particular, WMO would like to stress the importance of weather and climate information in relation to transportation accidents involving tankers and trains that were associated with extreme events; the impact of ice, flooding and landslides triggered by rainfall, for example, on fixed-transit infrastructure, including transmission lines and pipelines; and the choice of facility locations, which subsequently determined transit requirements.

IV. Conclusion

37. The summaries provided by Member States and international organizations show their clear interest in further enhancing existing frameworks to focus specifically on reliable and stable energy transit. Whether through an annual energy dialogue, a new legal framework or protocol, an expert group or the enhancement of existing regimes, there is general consensus on the need to renew focus on the issue of energy transit security.

38. Within the existing energy transit framework, there is opportunity for more detailed rules on transit and for more comprehensive investment guidelines. Opportunities for enhanced international cooperation include measures to facilitate or promote investment in energy transit. Investment in and expansion of the transport network would help alleviate capacity constraints, reduce transport costs and enhance competition. International cooperation can also be strengthened by enhancing legal standards that address issues such as freedom of transit and the distinction between trade in energy goods versus trade in energy services.

39. Future dialogue may focus on developing enhanced transportation systems and pipeline networks at the international, regional and global levels. Other important

areas of cooperation are the diversification of resources, the diversification of energy transportation routes, the design of enhanced oil and gas pipelines using advanced technologies, the improvement of pipeline systems and the further development of pipeline networks and other energy infrastructure, including electricity grids. The initiatives can be advanced by formulating concrete international legal principles and norms, taking into account the experience gained by Member States and international organizations.